

Department of Geography & GeoInformation Science

GGG 307-001/507-001 Sustainable Development | Fall 2018

Instructor Contact Details

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Course Details

Meeting Times : MW – 3:00 pm – 4:15 pm
Location : Exploratory Hall 2103
Office hours : TR - 1:00 – 2:30 pm
Credits : 3.000

Catalog description:

Sustainability lies at the intersection of the environment, society, and economics. A sustainable future requires professionals who are able to integrate sustainability into existing programs. A particular knowledge base and skill set is required to drive this kind of transformational change. This course will explore the concepts, applications, and tools for analysis and decision making in support of environmentally sustainable, socially responsible, and economically prosperous development. Case studies and problem-solving exercises will be used to stimulate learning and provide practical experience in addressing sustainable development issues.

Student Learning Objectives:

Upon course completion, a student will be able to:

- Examine critically the 17 newly minted UN Sustainable Development Goals
- Understand the historical evolution, key theories, and concepts of sustainable development.
- Articulate the major issues affecting sustainable development and how sustainable development can be achieved in practice.
- Identify and apply methods for assessing the achievement of sustainable development
- Discover the science, technology, economics, and politics underlying the concepts of sustainability.
- Understand the implications of overuse of resources, population growth and economic growth and sustainability.
- Explore the challenges the society faces in making transition to renewable resource use.
- Analyze arguments, similarities, and disagreements in the sustainability debate.
- Develop skills that will enable students to understand attitudes on individuals, society and their role regarding causes and solutions in the field of sustainable development.
- Apply critical thinking skills to evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources.
- Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

Required Course Materials: Exploring Sustainable Development: Geographical Perspectives. Edited by Martin Purvis and Alan Grainger.

Recommended Textbook: Sustainability: A Comprehensive Foundation by Tom Theis and Jonathan Tomkin, Editors.

The instructor has selected additional required readings that are placed under “Content” through the Blackboard [<https://mymasonportal.gmu.edu>].

Teaching and Assessment

GGG 307/507 is being offered as a combined undergraduate and undergraduate course. Our weekly meetings will comprise lectures, group or student-led discussions, guest lecturers, and class videos. Active participation is required in all sessions for students to pass this course.

Grading Policy

The following grading criteria will be used to determine your final grade:

Your performance in the course will be evaluated from the following components:

Assessment	% (of final grade)	Assessment	% (of final grade)
Simulation Reflection Papers / Article Summary	10%	Simulation Reflection Papers / Article Summary	10%
Class Participation [You are expected to attend classes]	5%	Class Participation [You are expected to attend classes]	5%
On-line discussion [Student's Engagement]	5%	On-line discussion [Student's Engagement]	5%
Short Quizzes	5%	Short Quizzes	5%
Exam I	15%	Exam I	15%
Midterm Exam	20%	Midterm Exam	20%
Group Presentation	10%	Draft Paper	5%
Final Exam	30%	Final Paper	25%
No Final Paper	-	Student Presentation	10%
Total	100	Total	100

Cut-off values for your final Letter Grade

GGG 307: A (93%) A- (90%) B+ (87%) B (83%) B- (80%) C+ (77%) C (70%) D (60%) F (<60%)
GGG 507: A (93%) A- (90%) B+ (87%) B (83%) B- (80%) C+ (77%) C (70%) D (60%) F (<60%)

Exams:

There will be 3 Exams [Exam 1, Mid Term and Final Exam for GGS 307 students. GGS 507 students will take 2 Exams Exam 1, Mid Term and Final Written Research Paper. The format of the examination will be Multiple Choice Questions, Short Answer Questions, and Fill-in the Blank Questions.

Group Discussion | Simulation Activities

Additionally, there will be reading assignments from time to time derived from your textbook and assigned articles that will be posted through the Blackboard. Through the discussion/debate and simulation activities, students will have the opportunity to gain an in-depth understanding of another person's perspective and to empathize with others.

Online Class Discussions – There will be weekly discussions unless otherwise stated through the Blackboard. I will lead the discussion by posting a topic related to the concepts and readings of the week. You will then follow-up with thought-provoking comments that foster interaction and discussion and demonstrate participation in class. Your original post should focus on the topic of the week. Additionally, I encourage you all to read other student's posts and make a short response to their posts. Be sure to post on time. Late posts will not be graded. Strictly - no make-up for this assignment.

Final Project

The final project is a unique opportunity for students to utilize and apply the concepts learned in class. Students will design a project proposal that addresses a real-world development challenges involving

sustainability. The focus of the research project can be any topic that will promote sustainability practices. Details of the project will be posted through the Blackboard.

- ✧ **GGG 307 students** - will complete the project in groups of 3-4. You will form a group based on the theme of your research interest for this course.
 - No final written paper will be required - Group Presentation Only.
- ✧ **GGG 507 students** – this will be an individual project. – Both presentation and Final Paper will be required.

Note: SafeAssign (Blackboard Plagiarism Prevention Tool) will be used to check all your written submissions for plagiarism.

Late assignments will receive 5 points penalty per day unless a doctor's note is provided.

Academic Integrity

George Mason University operates under an honor system, which is published in the University Catalog and deals specifically with cheating, attempted cheating, plagiarism, lying, and stealing. Please familiarize yourself with the honor code, especially the statement on plagiarism (<http://www.gmu.edu/org/honorcouncil/guidelines.htm>).

Email Policy

GMU faculty and staff may only correspond with students through the students' GMU assigned email accounts. Emails sent from other accounts will not necessarily be answered. Course information will be shared via email. Please notify me if you would like your email to remain private and not shared with your classmates. Gmail or Yahoo accounts etc. will not be acknowledged.

University Services

George Mason University has several academic support and other resources to facilitate your success. Some of these resources are presented below:

- i. Counseling and Psychological Services [<http://caps.gmu.edu/>]
- ii. Learning Services, University Career Services [<http://careers.gmu.edu/>]
- iii. The Writing Center [<http://writingcenter.gmu.edu/>] and other Learning Services within GMU.
- iv. University Catalog: <http://catalog.gmu.edu/> |
- v. University Policies: <http://universitypolicy.gmu.edu/>

Students with Disabilities

George Mason welcomes students with disabilities into the University's educational programs. If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Services (ODS) at 703-993-2474. All academic accommodations must be arranged through the ODS. All students with questions or concerns about this class are encouraged to set up a time to meet with the professor, preferably during the first two weeks of the semester. Disability Services (ODS) website: <http://ods.gmu.edu/> / Student Union Building I (SUB), Room 2500. Telephone: (703) 993-2474.

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:

As a faculty member, I am designated as a “Responsible Employee,” and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s Title IX Coordinator per University Policy 1412. If you wish to speak with someone confidentially, please contact one of Mason’s confidential resources, such as Student Support and Advocacy Center (703-380-1434) or Counseling and Psychological Services (CAPS) (703-993-2380). You may also seek assistance from Mason’s Title IX Coordinator by calling 703-993-8730 or emailing cde@gmu.edu.

Tentative Schedule & Readings

The schedule presented below is subject to change at the discretion of the instructor. Every effort will be made to announce changes in advance, however, students are responsible for changes. Students should regularly check the course Blackboard account as information related to the class including schedule and assignment changes will be communicated there or through the GMU email.

Date	Topic description	Readings /Assignments
08/27	Introductions and Course Overview	None
08/29	The Concept of Sustainable Development <ul style="list-style-type: none"> • Geography and Sustainable Development • Our Earth and the Sustainability Crisis • The Sustainable Development (SD) timeline 	Chapter 2 Guest – Office of Sustainability Sustainable Mason
09/03	Labor Day – No classes	
09/05	The UN Sustainable Development Topics <ul style="list-style-type: none"> • Sustainable Development Goals • The United Nations and Global Sustainability 	Development Knowledge Platform (Topics) https://sustainabledevelopment.un.org/topics <i>In-class Quiz # 1</i>
09/10	Role-plays and simulation Activity on Sustainability Issues	Handout [Conference Room] <i>Article Summary [Individual]</i>
09/12	The role of Spatial Scale in Sustainable Development	Chapter 3
09/17	Sustainable Agriculture Food Miles and Sustainability Tasting Sustainability – The Role of Farmers Markets	Chapter 8 <i>Simulation Reflection Paper</i> <i>In-class Quiz # 2 [Individual]</i>
09/19	Campus Sustainability Connect [Outdoor Learning]	Innovation Food Forest
09/24	Stimulus Activity and Group Discussion on Food Accessibility	Handout/Instructions – Check Blackboard
09/26	Sustainable Infrastructure and Urban sustainability <ul style="list-style-type: none"> • The Patterns of Urbanization Around the World • Resilient cities – What makes a city sustainable, green, and resilient? 	Chapter 6 <i>In-class Quiz # 3</i>
10/01	Exam 1	
10/03	Sustainable urban development [Sustainable Cities] <ul style="list-style-type: none"> • Human development and environmental preservation • Case Study: Curitiba Sustainable city 	Chapter 6 <i>Group Project -Topic description [GGS 307]</i> <i>Individual Project - Topic description [GGS 507]</i>
10/08	Fall Break [This Monday Class Meets on 10/9]	
10/09	Climate Change, Energy and Sustainable Development <ul style="list-style-type: none"> • Climate Change: A Threat to Sustainable Development • Energy Conservation Measures 	Chapter 10 Additional Reading check Blackboard
10/10	Climate Change, Energy and Sustainable Development - Continued <ul style="list-style-type: none"> • Mitigating Climate Change • Scales of Change – Theory and Practice 	Chapter 10 <i>In-class Quiz # 4</i> Additional Reading check Blackboard
10/15	Simulation Activity on Climate Change – Paris Agreement	Handout [Meeting in a Conference Room]

Date	Topic description	Readings /Assignments
10/17	Mid-Term Exam	
10/22	The concept of Planetary Boundaries [Video]	Rockstrom et al., “Planetary Boundaries: Exploring the Safe Operating Space for Humanity” Steffen, "How defining Planetary Boundaries can Transform our Approach to Growth” <i>Simulation Reflection Paper# 3 [Group]</i>
10/24	Planetary boundaries & Geographic Perspectives – Continued	Rockstrom et al., “Planetary Boundaries: Exploring the Safe Operating Space for Humanity” Steffen, "How defining Planetary Boundaries can Transform our Approach to Growth” <i>In-class Quiz # 5</i>
10/29	Planetary boundaries & Geographic Perspectives – Class Discussion	Handout/Instructions – Check Blackboard
10/31	Tools, Systems, and Innovation for Sustainability [Measuring Sustainability] <ul style="list-style-type: none"> • How do we measure sustainability? • Sustainability Indicators 	Check articles through the Blackboard
11/05	Life Cycle Assessment I <ul style="list-style-type: none"> • Overview of LCA 	<i>In-class Quiz # 6</i> Check articles through the Blackboard
11/07	Life Cycle Assessment II <ul style="list-style-type: none"> • Application of LCA • The Challenges of Sustainable Supply Chain Management 	Check articles through the Blackboard
11/12	Life Cycle Assessment – Stimulus Activities and Group Discussions	Handout/Instructions – Check Blackboard <i>Draft due</i>
11/14	Corporate Sustainability I <ul style="list-style-type: none"> • Corporations and Ecological Sustainability • Walmart as an example of corporate sustainability 	Check articles through the Blackboard Corporate Responsibility Report for Walmart, https://corporate.walmart.com/ <i>Simulation Reflection Paper# 4 [Group]</i>
11/19	Corporate Sustainability II <ul style="list-style-type: none"> • Global Sustainability – Global Value Chains 	Guest Lecturer <i>In-class Quiz # 7</i>
11/21-25	Thanksgiving Recess [No classes]	
11/26	Group Presentation I	
11/28	Group Presentation II	
12/03	Group Presentation III	
12/05	Group Presentation IV (If necessary)	Final Exam Revision
12/10	Reading Day	<i>Final Paper due – GGS 507 Students Only</i>
12/17	<i>Final Exam [GGS 307 Students Only]</i>	1:30 – 4:15 pm

All additional course readings are available online through the Blackboard